

Vinyl Toluene Comments of Environmental Defense

Submitted via Internet 11/1/02

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for Vinyl Toluene (CAS # 25013-15-4).

The Robust Summary/Test Plan for vinyl toluene, a mixture of the meta and para isomers in an approximate 60/40 ratio, draws heavily on previous studies of styrene and para methylstyrene. This is appropriate, as styrene is a closely related chemical and para methylstyrene actually accounts for 40% of this mixture of chemicals. Para methylstyrene was the subject of a previous submission to the HPV Challenge Program by Deltech Corporation, a manufacturer of vinyl toluene. Further, there are no apparent structural differences between meta and para methylstyrene that would indicate differences in the toxicity or environmental persistence of the meta isomer or a mixture of these chemicals. Thus, it appears data on vinyl toluene, when combined with that on para methylstyrene and styrene, are probably sufficient under the HPV program. However, the available data and relevant bridged data on closely related chemicals should be much better described than is presently the case.

Specifically, the Test Plan/Robust Summary does not reference any of the studies described. It also fails to adequately describe how data might be bridged from work on closely related compounds. The desired data are probably available in one or more of the references described in the Robust Summary, but there is no way that can be determined. Similarly, although the second chemical used to bridge data for vinyl toluene, styrene, is addressed in some detail in the Test Plan, narrative supporting data are not described in the Robust Summary.

If these informational deficiencies are appropriately remedied, it appears that sufficient data exist to fill the SIDS dataset and that no additional studies will be needed. (This conclusion could change if some existing studies turn out to be inadequate.)

Other improvements to the Test Plan and Robust Summary would greatly facilitate review and enhance public utility of these documents. These are described below.

1. It is stated on page 7 of the Test Plan that "A complete metabolic picture is not available with styrene ---". This statement is incorrect as there are few, if any, chemicals for which there is a more complete "metabolic picture" than styrene. Extensive data are available, but are poorly described in this document.
2. The Test Plan provides minimal description of the extensive studies of vinyl toluene conducted by the National Toxicology Program and reported in Technical Report 375. These studies account for much of the material on vinyl toluene in the Robust Summary, but are not well described in the Test Plan.
3. The NT! studies are listed as questionable as to whether they were conducted under Good Laboratory Practices (GLP). A careful review of these studies would make it obvious that they were conducted under GLP.

4. Considerable information regarding the toxicity and safe use of vinyl toluene are available in the literature (see [http://ntp-server.niehs.nih.gov/htdocs/CHEM_H&S/NTP_Chem2/Radian25013-15-4,htm](http://ntp-server.niehs.nih.gov/htdocs/CHEM_H&S/NTP_Chem2/Radian25013-15-4.htm) I), but they are not described or referenced in the Robust Summary/Test Plan.
5. Only the first few pages of the 98-page Robust Summary is in the form normally submitted for the HPV Challenge Program. The Robust Summary briefly describes work done with vinyl toluene and consists primarily of what appear to be study reports of work done with para methylstyrene. Studies of para methylstyrene are directly relevant to the toxicity of vinyl styrene, but most of these study reports appear to be "pasted" intact from another source and contain a great deal of unnecessary detail without interpretation or summarization to relate the results to vinyl toluene.
6. Some data, such as that on environmental fate and fugacity, described in the Robust Summary should also be described in the narrative portion of the Test Plan.
7. Data on the environmental fate of vinyl toluene do not seem to be referenced in the Robust Summary. Other data in the Robust Summary, e.g. LDSOs, are given but are described as "not reviewed".
8. Finally, uses, possible sources of occupational, and environmental exposures are not described in the Robust Summary/Test Plan. While such information is not required under the HPV initiative, it is very useful in evaluating any potential hazard. An industry consortium, the Alliance for Chemical Awareness, has developed useful guidelines for presenting exposure information in conjunction with Test Plans. See <http://www.chemicalawareness.org/exposure/eframework.html>.

Thank you for this opportunity to comment.

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